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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,775

04/14/2004

Uwe Mickan

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4698

909 7590 03/15/2007
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EXAMINER

KIM, PETER B

ART UNIT

PAPER NUMBER

2851

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/823,775

Applicant(s)

MICKAN ET AL.

Examiner

Peter B. Kim

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 10 and 12-23 is/are rejected.
- 7) ☒ Claim(s) 4-6, 8, 9 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments filed on Dec. 11, 2006 have been fully considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 13-16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by De Smit et al. (De Smit) (2005/0225734).

De Smit discloses a method of fabricating a device using a lithographic process, a lithographic apparatus, and a method of processing a device using a lithographic process comprising an illumination system (LA) of ultraviolet radiation (para 0060), a support structure (MT) to support a patterning device (MA), a substrate table (WT) configured to hold a substrate (W), a projection system (PL), an electric field generator (Fig. 5, ref. 28) configured and arranged to apply an electric field across a resist layer (para 0083) applied on top of the device or substrate, and conductive resist material (27, electrode) while exposing the resist to UV radiation, wherein the direction of the field is substantially perpendicular to the plane of the resist layer (Fig. 9, para 0108). De Smit discloses providing a layer of conductive material on a lower surface of the resist and applying the electric field during exposure (para 0108) and orienting the electric field so that the upper surface of the resist layer is at a positive potential with respect to a lower surface (Fig. 9, para 0108).

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Claims 1-3, 10, and 12-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Bristol et al. (Bristol) (2005/0074706).

Bristol discloses a method of fabricating a device using a lithographic process, a lithographic apparatus, and a method of processing a device using a lithographic process comprising an illumination system of ultraviolet radiation and extreme ultraviolet radiation (para 0014), a support structure to support a patterning device, a substrate table configured to hold a substrate, a projection system (para 0002), the structure of a photolithographic apparatus not explicitly disclosed in Bristol are inherent), an electric field generator (Fig. 1, 4-8) configured and arranged to apply an electric field across a resist layer (10) applied on top of the device or substrate (12), and conductive resist material (14) while exposing the resist to an UV or EUV radiation (para 0014, 0023), wherein the direction of the field is substantially perpendicular to the plane of the resist layer (Fig. 4-6, para 0013). Bristol discloses the conductive material (14) applied to an upper surface of the resist (10, Fig. 4), and the electric field applied by connecting to a fixed potential (16). Bristol discloses applying an electric field cross the resist by directly coupling the resist to a fixed potential (Fig. 4, 6) and orienting the electric field such that the upper surface of the resist layer is positive (Fig. 5).

Allowable Subject Matter

Claims 4-6, 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Regarding claim 4, none of the prior art of record teaches or discloses a method of fabricating a device using a lithographic process comprising the conductive material which is metal in combination with the limitations of claims 1 and 2.

Regarding claim 6, none of the prior art of record teaches or discloses a method of fabricating a device using a lithographic process comprising the layer of conductive material which overlaps a side or base of the device in combination with the limitations of claims 1 and 2.

Regarding claim 8, none of the prior art of record teaches or discloses a method of fabricating a device using a lithographic process comprising the layer of conductive material which overlaps a side or base of the device in combination with the limitations of claims 1 and 7.

Regarding claim 9, none of the prior art of record teaches or discloses a method of fabricating a device using a lithographic process comprising applying a layer of conductive material to upper surface and the lower surface of the resist in combination with the limitations of claim 1.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 9:00 AM - 6:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Peter B. Kim
Primary Examiner
Art Unit 2851

March 13, 2007